CLAIMS

1. A doctor unit in a paper machine, which includes a blade carrier (10) with a blade holder (11) fitted to it, on which a doctor blade (12) is arranged for doctoring a roll (13) or similar moving surface, characterized in that the blade holder (11) and/or doctor blade (12) include one or more sensors (16, 16', 18, 21, 24, 24', 26) installed inside the construction or on its surface, and which sensors (16, 16', 18, 21, 24, 24', 26) are arranged to measure the wear of and/or stress in the blade holder (11) and/or doctor blade (12).

2. A doctor unit according to Claim 1, characterized in that one or more optical fibres (16, 16', 26) adapted as sensors are installed inside the blade holder (11) and/or doctor blade (12).

3. A doctor unit according to Claim 1, characterized in that on the surface of the blade holder (11) and/or doctor blade (12) there are one or more pressure-sensitive sensors (21) and/or stress-strain sensors (24, 24') arranged to measure the blade load.

4. A doctor unit according to Claim 2, characterized in that the doctor unit includes light transmitting devices (20), at one end of the doctor unit, connected to the optical fibres (16, 16'), and light receiving devices (20') at the other end.

5. A doctor unit according to Claim 2 or 4, characterized in that the blade holder (11) includes a top plate (17), in which there are one or more optical fibres (16') arranged in essentially the transverse direction of the doctor unit and extending from one end of the top plate (17) to the other.

6. A doctor unit according to Claim 2 or 4, characterized in that the optical fibres (16) installed inside the doctor blade

(12) and extending over the entire length of the doctor blade (12) are arranged essentially transversely to the doctor unit 0,5 - 10 mm, preferably 2 - 6 mm from each other.

7. A doctor unit according to Claim 5 or 6, characterized in that there are 1 - 15, preferably 3 - 10 optical fibres (16, 16') in the blade holder (11) and/or the doctor blade (12).

8. A doctor unit according to Claim 3, characterized in that the sensors (21) are arranged essentially over the entire width of the doctor unit in the area of contact between the top plate (17) belonging to the blade holder (11) and the doctor blade (12).

9. A doctor unit according to Claim 3 or 8, characterized in that the pressure-sensitive sensor (21) is an as such known PVDF membrane sensor or an EMF sensor operating on the piezo-electric principle.

10. A doctor unit according to Claim 9, characterized in that 1 - 10, preferably 2 - 6 PVDF sensors are fitted over the width of the doctor unit to each metre of the width of the doctor unit.

11. A doctor unit according to Claim 1 or 2, characterized in that the optical fibre (26) includes filaments (26') acting as sensory organs and that it is connected to an electrical crystal (27), which is arranged to send a signal when the resistance in the optical fibre changes.

12. A doctor unit according to one of Claims 1 - 10, characterized in that the measurement of the wear of and/or stress in the blade holder (11) and/or the doctor blade (12) is arranged to be momentary and/or continuous when the sensors (16, 16', 18, 21, 24, 24', 26) are connected to the selected monitoring system.